

Davis-BesseNPEm Resource

From: CuadradoDeJesus, Samuel
Sent: Tuesday, January 24, 2012 8:00 PM
To: dorts@firstenergycorp.com; Davis-BesseHearingFile Resource
Subject: DB Teleconference summaries for your review. Let me know if you have any comments
Attachments: 8 29 2011 DB NRC Telecon Summary.docx; 10 31 2011 DB NRC Telecon Summary.docx

Importance: High

Regards,

Samuel Cuadrado de Jesús

Project Manager

Projects Branch 1

Division of License Renewal

U.S. Nuclear Regulatory Commission

Phone: 301-415-2946

Samuel.CuadradoDeJesus@nrc.gov

Hearing Identifier: Davis_BesseLicenseRenewal_Saf_NonPublic
Email Number: 3464

Mail Envelope Properties (377CB97DD54F0F4FAAC7E9FD88BCA6D0806FD759AC)

Subject: DB Teleconference summaries for your review. Let me know if you have any comments
Sent Date: 1/24/2012 8:00:01 PM
Received Date: 1/24/2012 8:00:06 PM
From: CuadradoDeJesus, Samuel

Created By: Samuel.CuadradoDeJesus@nrc.gov

Recipients:
"dorts@firstenergycorp.com" <dorts@firstenergycorp.com>
Tracking Status: None
"Davis-BesseHearingFile Resource" <Davis-BesseHearingFile.Resource@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	Size	Date & Time
MESSAGE	264	1/24/2012 8:00:06 PM
8 29 2011 DB NRC Telecon Summary.docx		29831
10 31 2011 DB NRC Telecon Summary.docx		35226

Options
Priority: High
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

LICENSEE: FirstEnergy Nuclear Operating Company

FACILITY: Davis-Besse

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON AUGUST 29, 2011 BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND FIRSTENERGY NUCLEAR OPERATING COMPANY, CONCERNING REQUESTS FOR ADDITIONAL INFORMATION PERTAINING TO THE DAVIS-BESSE, LICENSE RENEWAL APPLICATION (TAC. NO. ME4640)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of FirstEnergy Nuclear Operating Company (FENOC or the applicant) held a telephone conference call on August 29, 2011, to discuss and clarify the applicant's responses to the staff's requests for additional information (RAIs) concerning the Davis-Besse license renewal application.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a description of the staff concerns discussed with the applicant. A brief description on the status of the items is also included.

The applicant had an opportunity to comment on this summary.

Samuel Cuadrado de Jesús, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Number:50-346

Enclosures:

1. List of Participants
2. List of Requests for Additional Information

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LICENSEE: FirstEnergy Nuclear Operating Company

FACILITY: Davis-Besse

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON AUGUST 29, 2011 BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND FIRSTENERGY NUCLEAR OPERATING COMPANY, CONCERNING REQUESTS FOR ADDITIONAL INFORMATION PERTAINING TO THE DAVIS-BESSE, LICENSE RENEWAL APPLICATION (TAC. NO. ME4640)

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Enclosure 1 provides a listing of the participants and Enclosure 2 contains a description of the staff concerns discussed with the applicant. A brief description on the status of the items is also included.

The applicant had an opportunity to comment on this summary.

Samuel Cuadrado de Jesús, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Number: 50-346

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SUMMARY OF TELEPHONE CONFERENCE CALL
DAVIS-BESSE
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS
AUGUST 29, 2011

PARTICIPANTS

AFFILIATIONS

Brian Harris	U.S. Nuclear Regulatory Commission (NRC)
John Klos	NRC
Seung Min	NRC
Cliff Custer	FirstEnergy Nuclear Operating Company (FENOC)
Steven Dort	FENOC
Kathy Nesser	FENOC
Don Kosloff	FENOC
Jason Stelmaszak	FENOC
Al Wise	FENOC
Tom Summers	FENOC

SUMMARY OF TELEPHONE CONFERENCE CALL
DAVIS-BESSE
LICENSE RENEWAL APPLICATION
AUGUST 29, 2011

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of FirstEnergy Nuclear Operating Company (FENOC or the applicant) held a telephone conference call on August 29, 2011, to discuss and clarify the following **response to requests for additional information (RAIs) and new RAIs** concerning the Davis-Besse license renewal application (LRA).

Brian Harris, NRC Project Manager, was delegated as the Davis-Besse license renewal project manager for this call. The purpose of the call was to discuss the applicant's response to RAI 3.3.2.2.5-2 and supplemental response to RAI 2.1-3 regarding abandoned equipment.

The teleconference began with the staff questions concerning the Davis-Besse steam generator tube-to-tubesheet welds. The applicant stated that previous arrangements were made with Sam Cuadrado de Jesus, NRC Project Manager, that this topic would be discussed at a later date. The staff agreed and this topic was tabled for a teleconference to be held in the upcoming week.

RAI 3.3.2.2.5-2 Response dated August 17, 2011

Discussion:

The staff stated that it will request an updated LRA Section B.2.9, "Scope of Program" that repeats the new program's description shown in the response letter's B.2.9, Program Description section, and a revised Acceptance Criteria element to include acceptance criteria for elastomeric components now added to the scope.

The applicant stated that it understand the request and a supplement will be submitted late next week; approximately September 9, 2011.

RAI 2.1-3 Supplemental Response dated August 17, 2011

Discussion:

The staff stated that there's a need to discuss license renewal future Commitment No. 26 implementation schedule. The staff stated that this discussion would be tabled for a later date due to the unavailability of the staff.

There was no further discussion, and the call was concluded.

SUBJECT: Summary of Telephone Conference Call conducted on August 29, 2011

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PCooper
BHarris
SCuadrado
EMiller
MMahoney
ICouret, OPA
TReilly, OCA
BHarris, OGC

LICENSEE: FirstEnergy Nuclear Operating Company

FACILITY: Davis-Besse

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON OCTOBER 31, 2011 BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND FIRSTENERGY NUCLEAR OPERATING COMPANY, CONCERNING REQUESTS FOR ADDITIONAL INFORMATION PERTAINING TO THE DAVIS-BESSE, LICENSE RENEWAL APPLICATION (TAC. NO. ME4640)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of FirstEnergy Nuclear Operating Company (FENOC or the applicant) held a telephone conference call on **October 31, 2011**, to discuss and clarify the **applicant's responses** to the staff's requests for additional information (RAIs) concerning the Davis-Besse license renewal application.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a description of the staff concerns discussed with the applicant. A brief description on the status of the items is also included.

The applicant had an opportunity to comment on this summary.

Samuel Cuadrado de Jesús, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Number:50-346

Enclosures:

1. List of Participants
2. List of Requests for Additional Information

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LICENSEE: FirstEnergy Nuclear Operating Company

FACILITY: Davis-Besse

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON OCTOBER 31, 2011 BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND FIRSTENERGY NUCLEAR OPERATING COMPANY, CONCERNING REQUESTS FOR ADDITIONAL INFORMATION PERTAINING TO THE DAVIS-BESSE, LICENSE RENEWAL APPLICATION (TAC. NO. ME4640)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of FirstEnergy Nuclear Operating Company (FENOC or the applicant) held a telephone conference call on October 31, 2011, to discuss and clarify the applicant's responses to the staff's requests for additional information (RAIs) concerning the Davis-Besse, license renewal application.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a description of the staff concerns discussed with the applicant. A brief description on the status of the items is also included.

The applicant had an opportunity to comment on this summary.

Samuel Cuadrado de Jesús, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Number: 50-346

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SUMMARY OF TELEPHONE CONFERENCE CALL
DAVIS-BESSE
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS
OCTOBER 31, 2011

PARTICIPANTS

AFFILIATIONS

Samuel Cuadrado de Jesús	U.S. Nuclear Regulatory Commission (NRC)
Christopher Hunt	NRC
Seung Min	NRC
Kenneth Karwoski	NRC
Todd Mintz	Center for Nuclear Waste Regulatory Analyses
Cliff Custer	FirstEnergy Nuclear Operating Company (FENOC)
Steve Dort	FENOC
Larry Hinkle	FENOC
Luke Twarek	FENOC

SUMMARY OF TELEPHONE CONFERENCE CALL
DAVIS-BESSE
LICENSE RENEWAL APPLICATION
OCTOBER 31, 2011

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of FirstEnergy Nuclear Operating Company (FENOC or the applicant) held a telephone conference call on October 31, 2011. The purpose of the telephone conference call was to discuss and clarify a draft request for additional information (RAI) 3.1.2.2.16-2 in relation to the FENOC response to RAI 3.1.2.2.16-1 submitted under FENOC letter dated October 21, 2011.

Response to RAI 3.1.2.2.16-1

Previous to the telephone conference call the following draft RAI was provided to the applicant:

Draft RAI 3.1.2.2.16-2

Background:

By letter dated October 21, 2011, the applicant responded to RAI 3.1.2.2.16-1, which addresses a need for the aging management of cracking due to primary water stress corrosion cracking (PWSCC) of the steam generator (SG) tube-to-tubesheet welds. In its response, the applicant stated that cracking due to PWSCC will be managed for the SG tube-to-tubesheet welds (Alloy 600) by a combination of the PWR Water Chemistry Program and the Steam Generator Tube Integrity Program. The applicant also stated that the Steam Generator Tube Integrity Program will be enhanced to include enhanced visual (EVT-1 or equivalent) examinations to monitor for cracking of the SG tube-to-tubesheet welds. The applicant further indicated that welds included in the inspection sample will be scheduled for examination in each 10-year period that occurs during the period of extended operation and unacceptable inspection findings will be evaluated by the Corrective Action Program using criteria in accordance with Section XI of the ASME Code.

In addition, the applicant indicated that a review of Davis-Besse operating experience has not identified any instances of cracking of the SG tube-to-tubesheet welds (Alloy 600); therefore, the weld inspection sample size will include 20 percent of the subject weld population or a maximum of 25, whichever is less. The applicant stated that in this case the maximum of 25 applies since the weld population for the two SGs is greater than 60,000. The applicant also indicated that if the SGs are replaced in the future with a design such that the tube-to-tubesheet welds are fabricated of Alloy 690-TT material, the examinations will no longer be required.

Issue:

In its review, the staff found a need to clarify whether or not the "Alloy 690 TT material," which refers to a potential material for future SG welds, means Alloy 690 TT tubes with Alloy 690 type weld material (eg. Alloy 52). The staff also noted that it is not so clear whether or not Section XI of the ASME Code has acceptance criteria for these SG tube-to-tubesheet welds. In addition, the staff found a need to further clarify whether or not the EVT-1 inspection is capable of detecting cracking in the tube-to-tubesheet weld.

The staff also requests that the applicant discuss the extent, to which the routine SG tube inspections, using bobbin coil or rotating coil examinations, can detect cracking of the tube-to-tubesheet welds.

The staff also found a need to clarify why a sample size of only 25 is adequate to monitor for the cracking of the SG tube-to-tubesheet welds in view of the following considerations: (1) potential variabilities exist in the weld chemistry, environment and stresses in the approximately 60,000 welds, (2) Alloy 600 is susceptible to PWSCC, (3) the applicant's SG tubes (Alloy 600) have experienced cracking due to PWSCC, indicating that the degradation mechanism (PWSCC) exists for the SG tubes, and (4) the applicant's program has not implemented any inspection intended to detect cracking in the tube-to-tubesheet welds.

Request:

1. The applicant indicated that examinations are no longer required if the SGs are replaced in the future with a design such that the tube-to-tubesheet welds are fabricated with Alloy 690 TT material. Please, provide information to clarify whether or not the "Alloy 690 TT material" means Alloy 690 TT tubes with Alloy 690 type welds (eg.; Alloy 52). If not, discuss why inspections are not necessary to manage cracking due to PWSCC of the replacement SG welds.
2. It is not clear that Section XI of the ASME Code has acceptance criteria for these SG tube-to-tubesheet welds. Please, discuss what acceptance criteria will be used to evaluate the indications found in the inspections.
3. Provide information to demonstrate the EVT-1 inspection is capable of detecting cracking in the tube-to-tubesheet welds. In addition, discuss the extent, to which the routine SG tube inspections, using bobbin coil or rotating coil examinations, can detect cracking of the tube-to-tubesheet welds.
4. Provide justification as to why a sample size of only 25 is adequate to monitor for the cracking of the SG tube-to-tubesheet welds in view of the following considerations: (i) potential variabilities exist in the weld chemistry, environment and stresses in the approximately 60,000 welds, (ii) Alloy 600 tubes are susceptible to PWSCC, (iii) the applicant's Alloy 600 tubes have experienced cracking due to PWSCC, indicating that the degradation mechanism (PWSCC) exists for the SG tubes, and (iv) the applicant's program has not implemented any inspection intended to detect cracking in the tube-to-tubesheet welds.

Discussion:

The staff and the applicant discussed each of the four requests of draft RAI 3.1.2.2.16-2 as follows:

Request 1

The staff requested clarification as to whether or not the "Alloy 690 TT material" means Alloy 690 TT tubes with Alloy 690 type welds (Ex. Alloy 52).

The applicant responded that the tubes and the tubesheet cladding of the replacement SGs will be fabricated with Alloy 690 TT material. In addition, the tube-to-tubesheet welds will not use weld filler material (i.e., autogenous welds).

The staff stated that it will revise draft RAI 3.1.2.2.16-2 accordingly.

Request 2

The applicant and the staff agreed that Section XI of the ASME Code does not have acceptance criteria for the SG tube-to-tubesheet weld examinations. One possibility is to evaluate the largest crack size that can be tolerated and set acceptance criteria accordingly.

Request 3

The staff indicated that the tube-to-tubesheet weld EVT-1 examination needs to be able to demonstrate that it is capable of detecting cracking due to PWSCC. The staff also stated that EVT-1 could be supplemented with the routine tube inspections (eddy current testing) if EVT-1 confidence is in question.

Request 4

The staff stated that it does not believe that a sample size of only 25 is adequate to monitor for the cracking of the SG tube-to-tubesheet welds.

After discussions between the staff and the applicant, it was agreed that the inspections should focus on the hot leg end of the SG and that an appropriate sample size would be 20 percent.

The applicant raised the issue that when the replacement SG are installed, assuming the subject welds are Alloy 690-TT material, that cracking due to PWSCC would be managed by the PWR Water Chemistry Program and the examinations would no longer be required.

The staff agreed.

ACTION: The staff will issue RAI 3.1.2.2.16-2.

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